Reliable optimization of the PEMFC stack efficiency for automotive application

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Outline

• Common use of stack efficiency
• Redefinition of stack efficiency
• Stack performance optimization method
• Optimization results of stack efficiency
• Conclusion
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• Redefinition of fuel cell efficiency on the stack level:
  ➢ New figure of merit including media conditioning
  ➢ Considering conditions in the system

• Stack performance optimization:
  ➢ Use of Nelder-Mead algorithm
  ➢ Different optimization functions (and combinations)
  ➢ Optimized operating conditions depend on load level
  ➢ Parameter optimization for look-up tables etc.
Thank you very much for your attention!

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